

**ABSTRACT**

A novel and useful virtual private network (VPN) mechanism and related security association processor for maintaining the necessary security related parameters to perform security functions such as encryption, decryption and authentication. A security association database (SAD) and related circuitry is adapted to provide the necessary parameters to implement the IPsec group of security specifications for encryption/decryption and authentication. Each security association (SA) entry in the database comprises ~~[[all]]~~ the parameters ~~that are~~ necessary to receive and transmit VPN packets ~~according to~~ in accordance with the IPsec specification.